

Newsletter for Birdwatchers

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■ **Editorial**

- ☐ A "SWOT" for our Newsletter
- ☐ May/June Issue
- ☐ Editor Away
- ☐ Visit to Mysore, Wyand and an Accident



■ **Articles**

- ☐ Need for Project Bustard, by Asad R. Rahmani
- ☐ Heronries of the Raigad District, Maharashtra, by Dr. Satish A. Pande, Anil Mahabal & Premasagar G. Mestri
- ☐ A Preliminary Report on the Indian crested peafowl in Channagiri Area, Karnataka, by Basavarajappa S.
- ☐ Alternate Nesting of Whitebellied Sea Eagle (*Haliaeetus leucogaster*) in Konkan, Maharashtra, by Viswas Katdare & Ram Mone
- ☐ A visit to Kanha National Park, Madhya Pradesh, India, by Tahmina Shafiq
- ☐ Avifauna in and around Jodhpur, Rajasthan, by Dr. Anil Kumar Chhangani
- ☐ A trip to Kutch in North East Gujarat, by Snehal Patel
- ☐ Flocking Pattern and Nesting Period of the Indian Skimmer in Chambal Sanctuary, by Rajeev Chauhan

■ **Correspondence**

- ☐ Sighting of Vultures, by A.M.K. Bharos
- ☐ Notes on adjutant storks and barheaded geese in North Karnataka, by Gurunath Desai
- ☐ Comments on the Newsletter, by Aasheesh Pittie
- ☐ Last Call of the Paradise Flycatcher, by Dr. Arunachalam Kumar
- ☐ An all-Black Crow Pheasant, by Dr. Arunachalam Kumar
- ☐ Nesting behaviour of Painted Storks, by Harish R. Bhat
- ☐ Enjoying birds, by Mrs. Pragati Nayak.
- ☐ Birds in Sariska, by Lt. Gen. Baljit Singh

Editorial

A "SWOT" for our Newsletter

'SWOT' (Strengths, Weaknesses, Opportunities and Threats) is a good technique for assessing and improving one's performance. I would welcome a few SWOT from our readers. You need have

no fear of offending me. I know my weaknesses more than any of you can possibly do. Perhaps I should set the ball rolling myself.

The objective of pleasant reading has been consistently maintained within the confines of the material received. This is our greatest strength though there is always room for improvement. There are no jealousies or resentments against other publications entering the field. In fact, it is a pleasure to see the general interest growing.

Several contributions need to be more severely edited and abstracts made of some of the larger articles. Some readers object to the shortening of their pieces but with the increasing material coming in, this will have to be done.

With a little effort the circulation could increase and the Newsletter needs to be more widely known.

None in evidence.

May/June 2002 Issue

The Guest Editor for the May/June number will be Aasheesh Pittie and I believe he intends to make the entire issue deal with changes in the nomenclature of birds. A standardised list of common and scientific names which all of us can rely on would be a great help.

Editor Away

I will be away in Kihim from early March till about the end of May. Kindly continue to send your letters, articles, to me and subscriptions to the Publisher as usual. I will attend to the correspondence after my return in early June. Till then "Stay with us" and "Take care" as is now the common greeting.

Visit to Mysore, Wyand and an Accident

On the 16th of January, Col. Thomas Chacko, well known for his sustained studies of the rare blacknecked crane in Ladakh and other areas, offered to take me and Shyamal K (entomologist, ornithologist, software engineer), to the Gurukula Botanical Sanctuary, Alattil P.O., North Wyand, Kerala 670 644.

We stopped the night of the 16th in Mysore and met the enthusiastic members of the Mysore Naturalists Society who have contributed many interesting articles to our Newsletter. They insisted that on the morning of the 17th we visit the Kukranhalli lake bordering one side of the Mysore University campus. What a delightful place it is ! We reached there before the sun was up and though we could see nothing, the vigorous twittering and chattering of birds made us realise that soon there would be a treat for our eyes. And so it was. When the mist lifted, the first birds we saw there were hundreds of jungle mynas emerging from a clump of trees on an island in the middle of the water and then *en masse*, fly in a single direction all together, no stragglers deserting their ranks. Even more arresting was the enormous flock of white ibises (*Threskiornis melanocephalus*), which again flew *en masse* but in the opposite direction. Soon afterwards a large flock of little cormorants with their white cheeks, flew in a third direction. Presumably these different species were all

heading for their chosen favourite feeding areas.

High up on a ficus there were two spotbilled pelicans making a very impressive picture against the clear sky. There were darters, large cormorants, cattle egrets, grey herons walking with characteristic dignity in the water, large numbers of rosy pastors, purple moorhens, spotbilled ducks, a marsh harrier and a brahimny kite.

Apparently this impressive water body had its ups and downs, depending on the interest or otherwise of the Municipal Corporation. Some officials recognise its ecological worth; others regard it as a convenient basin for taking in the city's sewage. We understood from Professor Sadanand, a retired professor of Botany and Editor of a Kannada Encyclopedia, that recently sewage flowing into this lake had been diverted elsewhere and there is hope that things will improve.

On the banks of this lake there is lightly wooded scrub and grassland, a favourite nesting area of the stone curlew (*Burhinus oedipnemus*). Apparently a large number of these birds parcel out the territory among themselves during the breeding season.

After this pleasant morning outing, we drove up to Wyanad in Kerala (one stretch through the Nagarhole National Park), to spend a couple of nights at the Gurukula Botanical Sanctuary (Wolfgang Botanical Sanctuary). Thirty years ago Theuerkauf Wolfgang, then a boy of 19, came overland to India and fell in love with Kerala. Being a passionate botanist, Wolfgang decided that this was the right place for him and commenced establishing a Botanical Sanctuary near Manantvady. This has now become a well known Research Centre for specialist species of plants, ferns, orchids and others. The Ministry of Environment in Delhi wants to collaborate with this institution to preserve some of our rare plants in the Western Ghats. It has become widely known among botanists and ornithologists, and while we were there we had the privilege of birding with Alan Morley (about whom Bob Stewart wrote in the previous issue), a Consultant of the Royal Society for the Protection of Birds (RSPB), no sound from an avian escapes him, and he intends to publish a book on bird calls, not by the normal attempted description by words (e.g. *crossword puzzle* for the cuckoo, and *did he do it* for the lapwing), but by a kind of Morse Code, of long and short, ascending and descending, and high and low pitched notes, which could become a definite dictionary for use by ornithologists. Groups of naturalists as well as generalists from abroad, congregate here from time to time (except in the four heavy monsoon months) to learn about the natural world. The stimulating atmosphere of the place can be conveyed by what Suprabha Seshan, the organizing ecologist of this unique effort wrote in 'News from the Sanctuary' of June 2001 :-

"Walking the forests is the private side of our work at the Sanctuary. The few remnants of tropical wilderness are our muse and inspiration. They discipline us. Guide us. Give rigour to the work. And perspective. We get to feel not only the creative force of life but also its mirror opposite – the distorted power of human nature. Juxtaposed with the wild are the ailing, diseased

landscapes that human beings have spawned, the ugly townships, the plantations, the rubbish dumps and slums, where our species' colossal greed and ruthlessness have spread wanton misery and desecration", and in the Jan 2002 issue, "The questions snowball year by year and the natural puzzle assumes staggering proportions. Why, for instance, did the *Impatiens* genus, radiate so explosively in these mountains? A single genus. *Impatiens*. Family *Balsaminaceae*. And this genus, which has a total of 800 species worldwide, has radiated into over a 100 species in this one mountain area alone. The rough equivalent of having a hundred different kinds of big cat, of the genus *Panthera* (which includes the lion, the tiger and the leopard), prowling around your neck of the woods. Not only is this impressive in itself, but it is the largest genus in India. None other has this many species. None of the genera within the orchids or legumes, or the grasses and asters – some of the other big plant groups – have quite so many. For a taxonomist, or a biogeographer, or even rainforest gardeners like us, this is a charming little detail."

This small mountain sanctuary, because of its location and well-preserved vegetation, has a wealth of birds, packed in a small space. Within a few minutes of arrival, we could see three species of sunbirds, a spider hunter, Malabar grey hornbills (those without a casque on their bills, unlike their cousins in the north with the queer protuberance, many emerald doves and racket-tailed drongos. And for me, a great thrill was to see the ruby throated bulbul (*Pycnonotus melanicterus*) for the first time, a bird that is worth going a long way to see, especially the sub species with its scarlet throat ! What interested me was that it behaved rather differently from its other cousins of the Pycnonotidae family. On a Calliandra tree bursting with white flowers it bent down and probed into the flowers for their nectar, just as sunbirds do, and a feeding habit rather different from the other bulbuls, bending over a flower to reach its nectar, unlike the other bulbuls.

And now, a brief reference to the accident. On the return journey on 19th January, with Col. Chacko at the wheel and Shyamal at his side, both securely seat belted, and I at the back seat without a belt, were suddenly confronted with the lorry charging at us. To avoid a head on crash and certain death, Col. Chacko at the wheel with his quick military response, swung sharply to the right, but could not avoid contact with lorry. Our car overturned. Kindly passersby, of whom there is no dearth in India, lifted up the car and put it back on its wheels. Chacko and Shyamal were able to unfasten themselves and walk out on to the bonnet through the opening provided by the missing windscreen. I woke up on the floor of the car, after a few minutes of unconsciousness, and was relieved to find that all three of us were unbroken. And while Chacko and Shyamal were involved with the inevitable police procedures, a generous gentleman (Mr. Suresh) on his way to Bangalore, offered to take me to a hospital and to look after me until help arrived in the form of Mrs. Chacko and my wife. The X - rays taken of my neck and back showed no damage had been done and I went home to lead a normal life except for a bad pain in the neck – the sort of pain to which Lavkumar refers when he has to identify warblers high up in the canopy of rain forests.



Introduction: Whenever we talk of wildlife protection, the normal tendency is to think of some forested area that needs protection from cutting or encroachment or other human use. Grasslands, wetlands, coasts, rivers, and rural landscapes rarely find a place in conservation priority, although some of the most endangered Indian species are found in such habitats.

Four members of the bustard family are found in Indian grasslands: The great Indian bustard *Ardeotis nigriceps* of the short grass plains and deserts; the Houbara bustard *Chlamydotis undulata* (winter migrant to the desert regions of Rajasthan and Gujarat); the lesser florican *Sypheotides indica*, found in the short grass plains in Western and Central India; and the Bengal florican *Houbaropsis bengalensis* of the tall, wet grasslands of the Terai and the Brahmaputra valley.

Just as the tiger is considered the "spirit of Indian forests", similarly the majestic great Indian bustard can be identified as an indicator of the health of grassland ecosystems of the Indian plains. The great Indian bustard forages, shelters, displays and breeds in grassland and its absence is the first warning signal that the grassland is deteriorating. The great Indian bustard is now on the brink of extinction. It is locally extinct from almost 90% of its former range and ironically it has disappeared from two sanctuaries made especially for its protection. In a few other sanctuaries it is declining rapidly. Earlier it was mainly poaching and habitat destruction that resulted in such a pitiable situation of this grand bird of the Indian grassy plains, but now mismanagement of the habitat, sentimental protection of certain problem animals, and apathy might exterminate this species.

In the early 1980s, the five states where the great Indian bustard is still found took some conservation measures and eight protected areas were declared. Despite all these conservation measures, the status of the great Indian bustard has sharply deteriorated during the last 10 years. This raises the question: Is the sanctuary approach appropriate for the protection of species that live in low density in scattered extant grasslands and marginal crop fields? The answer is yes and no. The sanctuary approach certainly helps in curtailing poaching but unless appropriate habitat protection measures are taken, declaring a sanctuary for bustard does not help in the long run. Now the question comes: how do you take 'appropriate habitat conservation measures' in someone's private land? Or, what do you do if the conservation measures result in increased crop damage by wild ungulates? Should we kill the problem ungulates to get the support of rural communities for the rare bustard, or should we allow the problem to fester and see the disappearance of highly endangered species? Unfortunately, due to lack of space, I would not be able to discuss all these issues here.

The following are the major problems:

1. Habitat destruction and habitat deterioration : Too many domestic animals. Disturbance during breeding. Conversion of grasslands and so-called wastelands into crop fields.
2. Poaching : Still widespread in parts of the Thar desert in Rajasthan.

Need for Project Bustard

ASAD R. RAHMANI, Chairman, IUCN Bustard Specialist Group and Director, Bombay Natural History Society

3. Increase in blackbuck and nilgai numbers resulting in crop damage and resentment by villagers against conservation movement in general, and bustard conservation in particular.
4. Corruption and total mismanagement of bustard sanctuaries.
5. No clear cut land-use policy and domestic animal grazing policy in India.

Presently, only between 400-500 bustards survive in India, making them one of the most endangered species of bustards in the whole world.

Need for Project Bustard

Project Tiger and Project Elephant have shown that by identifying an indicator species and focusing attention on it and its habitat, a substantial part of our natural ecosystem that benefits an array of threatened species can be protected. Bustards and floricans can be considered as indicators of the grassland ecosystems and by conserving them and their habitats, a very large number of species of Indian grasslands will also be protected. Protection and proper management of these grasslands would also benefit the local communities. The grasslands that are the preferred habitats of bustards/floricans are under-represented in the protected area network in India. Some of the bustard sanctuaries have been destroyed by misguided management practices. There is no coordination between states and among managers within states. We have nearly 20% of the world's livestock but no attention is given to protect grasslands on which this livestock feeds. There is no long-term research on bustards and at present we do not know even the basic biology of these highly endangered and declining species. Taking into consideration all these factors, the Government of India should start 'Project Bustard' on the lines of Project Tiger with the following objectives:

1. To conserve all the four species of bustards in India.
2. To conserve the habitat types of the Indian bustards and their associated species.
3. To establish with the cooperation of the State Government and local people more bustard conservation areas.
4. To supervise and coordinate management of bustard conservation areas.
5. To coordinate long-term studies on bustards and their habitats in different states.
6. To produce educational material for publicity for decision makers, stake holders, students etc.
7. To integrate bustard habitat conservation with National Grazing Policy and overall land use pattern.

During the last five years, the Bombay Natural History Society has been undertaking environmental education campaigns in the Thar desert where nearly 50% of the bustard population occurs. It is showing good results but this is not enough. The Government of India has not yet realized the deteriorating status of the bustard. Therefore, we have decided to start a one-year intensive media campaign by writing articles in different magazines, newsletters and journals. The Government of India will not do anything unless we bombard it with letters, requests and petitions. I therefore request the readers of our Newsletter to write polite letters to the following persons:

1. Hon'ble Shri Atal Bihari Vajpayee, Prime Minister of India, South Block, New Delhi 110 011. Fax: 091-11-3016857/9817
2. Mr. T.R. Balu, Minister of Environment and Forests, Government of India, Paryavaran Bhawan, C.G.O. Complex, Lodhi Road, New Delhi 110 003

3. Mr. S.C. Sharma, Addl. Director (Wildlife), Ministry of Environment and Forests, Government of India, Paryavaran Bhawan, C.G.O. Complex, Lodhi Road, New Delhi 110 003. Fax: 91-011-4363918



Heronries of the Raigad District, Maharashtra

SATHISH A. PANDE, PREMSAGAR G. MESTRI, ELA Foundation, C-9, Bhosale Park, Sahakarnagar-2, Pune 411009 and ANIL MAHABAL, Zoological Survey of India, WRS, Akurdi, Pune 411044

A preliminary survey of heronries of Raigad district of Maharashtra was undertaken in 1990 by Anil Mahabal. A survey of the avifauna in Raigad district of Maharashtra was again undertaken during the rainy season from June to September, 2000. We made a number of visits in the district including the coastal region, during which several heronries were recorded. Raigad district lies in the western part of Maharashtra, the Konkan, bearing 18 degrees, 19' N latitude and 73 degrees, 53' E longitude. The annual rainfall in the district is between 260 and 360 cm. The main agricultural crops are rice and ragi.

During the present avifaunal surveys a number of heronries and breeding populations of little cormorant *Phalacrocorax niger*, pond heron *Ardeola grayii*, median egret *Egretta intermedia*, (Wagler) cattle egret *Bubulcus ibis* (Linnaeus) and night heron *Nycticorax nycticorax* (Linnaeus) were noticed at different places in various talukas of the district (Table 1).

Table 1 also indicates that most of the heronries were observed on trees like Mango *Mangifera indica* (56 trees), followed by Tamarind *Tamarindus indica* (7 trees), Bamboo *Bambusa* spp. (5 trees); Shirish, *Albizia lebbek* (Benth.) (5 trees); Pipri *Ficus amplissima* (J.E. Sm) (2 trees), Neem *Azadirachta indica* (2 trees), Kate Sarvar *Bombax ceiba* (2 trees), Bahava *Cassia fistula* and Bottle Brush *Callistemon lanceolatus* (1 tree each). On an average the height of all the nests was 8 to 9 mt. above the ground level. Further, all the nesting sites of herons and egrets were close to waterbodies.

Types of heronries in the present survey:

Singh and Sodhi (1985) have described the system of classification of heronries in general. The heronries in Raigad district during this survey can be classified as follows:

1. All the heronries were very close to human settlement and hence they can be described as 'associated' type of heronries
2. The nesting and breeding of herons, egrets and cormorants was observed only on trees and hence they can be treated as 'tree' type of heronries.
3. All these heronries were of 'mixed' type as various species of herons and egrets were nesting together.
4. The heronries were either on a single tree or on scattered trees located in a small area, hence they can be considered as 'loose' type.
5. All these heronries seem to be small-sized.

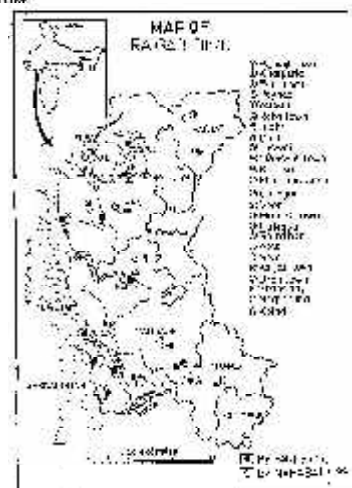
Mahabal (1990) had recorded heronries at thirteen places in the Raigad district during his faunistic survey in July, 1987 (Fig. 1). During the present survey, besides the heronries at Pen, Panvel, Roha and Mangaon towns (as also recorded by Mahabal, 1990), an additional eleven heronries were observed in the district.

Table 1: Heronries of different places in Raigad district, Maharashtra.

S. No.	Place	Taluka	Dist.	Tree/No.	HT. (m)	LC	PT	MS	CE	NH	No. of Nests	Remarks
1	Panvel	Panvel	MD	Mango-5	9	Y	Y	Y	-	Y	12	B
2	Pen	Pen	MD	Mango-3	9	Y	Y	Y	-	Y	7	B
3	Pen	Pen	MD	Mango-7	11	Y	Y	Y	-	Y	214	B
4	Pen	Pen	MD	Mango-4	8	Y	Y	Y	-	Y	17	B
5	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	15	B
6	Pen	Pen	MD	Mango-4	8	Y	Y	Y	-	Y	15	B
7	Pen	Pen	MD	Shirish-5	8	Y	Y	Y	-	Y	15	B
8	Pen	Pen	MD	Bottle Brush-1	8	Y	Y	Y	-	Y	1	B
9	Pen	Pen	MD	Neem-1	8	Y	Y	Y	-	Y	1	B
10	Pen	Pen	MD	Kate Sarvar-1	8	Y	Y	Y	-	Y	1	B
11	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
12	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
13	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
14	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
15	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
16	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
17	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
18	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
19	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
20	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
21	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
22	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
23	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B
24	Pen	Pen	MD	Mango-1	8	Y	Y	Y	-	Y	1	B

LC: Leafy canopy; PT: Paddy field; MS: Mangrove; CE: Cattle egret; NH: Night heron; B: Breeding; Y: Yes; N: No; HT: Height of the nest from the ground level; No. of Nests: Number of nests; Remarks: Remarks.

HT: Height of the nest from the ground level; No. of Nests: Number of nests; Remarks: Remarks.



Hence, considering both the avifaunal surveys, altogether 24 nesting and breeding sites of herons and egrets have been sighted in this district. (Fig. 1). It can be inferred that in some cases even after 14 years, the herons and egrets were occupying the same nesting and breeding sites in the above mentioned towns. Hence, these heronries can be considered to be 'traditional'. Mahabal (1990) had earlier pointed out that hardly

any heronries were observed in the southern part of the district, but during the present survey a number of heronries were noticed in the southern part, particularly in Shrivardhan, Mhasala and Mahad talukas. It is also true that so far no heronry has been sighted in Poladpur taluka. Further, it can be said that little cormorants and night herons were not observed in heronries recorded by Mahabal (1990), whereas during this survey both these species were observed to be nesting for the first time, at many places in the district (Table 1).



Preliminary Report on the Indian Crested Peafowl in Channagiri Area, Karnataka

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The landscape in the vicinity of my village is diversified with different types of vegetation, which naturally results in the presence of different species of birds. One of the birds I was particularly interested in was the large flocks of peafowl in various areas, viz. horticultural plantations, paddy fields, scrub and dry deciduous vegetation in the Channagiri area. I decided to keep a careful record of these birds.

The peafowl, a large bodied gallinaceous bird (Order: Galliformes family phasianidae), a bird of brilliant plumage, has several species and subspecies in different parts of the world. The blue and crested peafowl *Pavo cristatus* is very common in the southern part of the Indian subcontinent. However, during recent years there has been an alarming decline. In many parts of India the killing and poaching of peafowl is taking place, and what is more distressing is that several birds died due to pesticide poisoning in Bihar, and also due to food poisoning in places like Polampur, Delhi. I am distressed to note that in many cities in Karnataka, peafowl feathers are made into fans and sold.

Study Area

Physiographically, Channagiri (a part of Davangere district) occupies a central position in the state of Karnataka and it constitutes the southern part of Deccan Peninsula. Further, it lies in between 13° 27' – 14° 39' north latitudes and 74° 38' – 76° 40' east longitudes with an altitude of 671 metres above msl. The landscape consists of vast stretches of plains with scattered small hillocks. The area receives 871.8 mm average annual rainfall. The climate is dry with 266.6 days sunshine. The mean temperature is 32.5°C, and the relative humidity is 70% (Basavarajappa and Hosetti, 2001a). The natural vegetation is confirmed to south west part of Channagiri taluka and which is diversified with deciduous tree species (Basavarajappa 2001a). The remaining area of land is scattered with horticultural gardens, paddy fields, rain fed crops and bushy vegetation particularly at the valley of small and uneven hillocks (Basavarajappa, 1998).

Materials and Methods

The study was carried out from 1998 to 2000 in different agro-ecosystems of Channagiri taluka of Davangere district. There were three different ecosystems identified at random viz., I. Plain area of 900 hectares (at Belalagere), II. Uneven land and small hills with sparse vegetation of 300 hectares (nearby Santhisagar – second biggest lake in South India) and III. Hillocks with dry deciduous vegetation of 600 hectares (at Joldhal). In each habitat, three permanent observation sites (1 sq. km. each) were selected

References:

- Mahabal, Anil (1990) Heronries in Raigad district, Maharashtra - A preliminary survey. J. Bombay nat. Hist. Soc., 87(1): 137-138
Singh N. and Sodhi, N.s. (1985) Heronries and the breeding population density of the Cattle Egret *Bubulcus ibis coromandus* (Boddaert) during 1985, in tehsil Kharar of the Ropar District (Punjab) Pavo, 23 (1/2): 77-84

and in each site regular observations were made every fifteen days to enumerate the group size of peafowls by following the method of Thirumurthi *et al.* (1993). The peafowls were age-classified as 'adults' and 'sub-adults' as per Cuvier (1993). Results were calculated and tabulated by following standard methods (Saha, 1992).

Results and discussion

The Indian crested peafowl *Pavo cristatus* in different habitat conditions of Channagiri area during the years 1998-2000 is shown in Table 1. The population consists of adult (viz., peacock and peahen) and subadult (juveniles) peafowl.

A. Adult population

Occurrence of cock and peahen in different habitats of Channagiri area is shown in Table 2. Among the adults, peahens were more, 38 to 45, 59 to 68 and 88 to 89 in habitats I, II and III during the year 1998, 1999 and 2000 respectively. Whereas, the peacock number was less and they were 8 to 12, 12 to 16 and 19 to 20 in habitats I, II and III during the year 1998, 1999 and 2000 respectively (Table 2). Further, the average number of male (cock) and female (peahen) peafowl occurrence during different years in different habitats of Channagiri area is also predicted in the Table 2. *Pavo cristatus* is a polygamous bird (Cuvier, 1993), the cock lives in the company of many peahens (Basavarajappa and Hosetti, 2001). Thus, the peahens were more compared to cocks and their population varied significantly ($F = 78.5$, $P > 0.05$) in different habitats of Channagiri area.

B. Sub-adult population

The sub-adult peafowl population consisted of the immature males and females with the age below 2 years. Until second year, the sub-adult male and female have the same plumage (Cuvier, 1993), and difficult to distinguish them as cock and peahen (Sharma, 1979). Thus, all the immature pea-chicks were together called 'juveniles' (Thirumurthi *et al.*, 1993). The juveniles were in the range of 19 to 39, 32 to 41 and 83 to 87 in habitats I, II and III during the year 1998, 1999 and 2000 respectively (Table-1). Hence, the total juvenile peafowl number varied significantly ($F = 65.27$, $P > 0.05$) among the habitats during the study period in Channagiri area.

Further, the habitat III (near Joldhal) had recorded highest (107 to 109 and 83 to 87) number of adults and sub-adult peafowls followed by the habitat II (at Santhisagar), where 71 to 84 adults and 32 to 41 sub-adults were recorded. The habitat I (located nearby Belalagere) has recorded the lowest number of adult (46

to 57) and sub-adult (19 to 39) peafowls. Thus, the peafowl population is high (195) in habitat III compared to habitat II and I (Fig-1). However, the major reason for the occurrence of more number of peafowls in habitat III compared to II and I, and the varied size group of peafowl in different habitats of this area has stimulated me to conduct further studies on habitat features, relative abundance and sex ratio of peafowl *P. cristatus* in Channagiri area. The results of those findings were published elsewhere.

Table 1. Adult and sub-adult peafowl number in Channagiri area.

Year	Peafowl	Habitat I	Habitat II	Habitat III
1998	Adults	57	84	108
	Sub-adults	39	41	87
1999	Adults	46	77	109
	Sub-adults	25	35	84
2000	Adults	46	71	107
	Sub-adults	19	32	83

Note: Each value is a mean of 24 observations.

Fig. - 1. Peafowl *Pavo Cristatus* population in Channagiri area

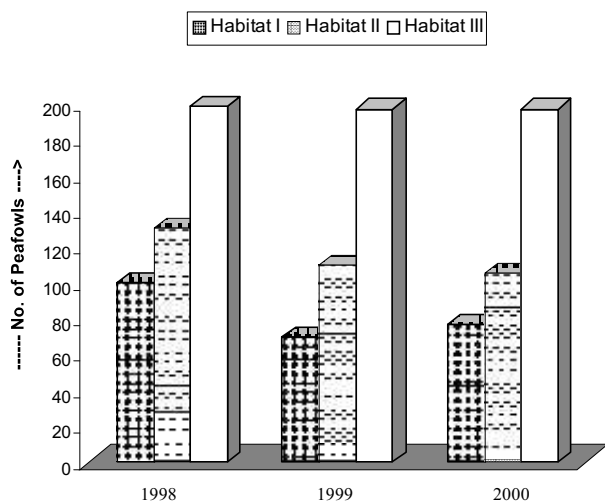


Table 2. Occurrence of peacock and peahen in Channagiri area

Sex	Year	Habitat I	Habitat II	Habitat III
Peacock	1998	12	16	20
	1999	08	12	20
	2000	08	12	19
	Average	9.3	13.3	19.6
Peahen	1998	45	68	88
	1999	38	65	89
	2000	38	59	88
	Average	40.3	64.0	88.3

Note: Each value is a mean of 24 observations.

References

- Basavarajappa, S. 1998. Status of natural colonies of *Apis dorsata* in Maidan region of Karnataka, India. Indian Bee J. 60(3): 143-146.
- Basavarajappa, S. 2001a. Studies on habitat features of Indian peafowl *Pavo cristatus* under diversified conditions of Karnataka, India. Pro. 88th ISC., New Delhi. Pp. 29.
- Basavarajappa, S. and Hosetti, B.B. 2001. Relative abundance, sex ratio and population decline of peafowl *Pavo cristatus* in Channagiri area of Karnataka, India. J.B.N.H.S. (In press).
- Cuvier, B. 1993. Encyclopaedia of Life Sciences. Anmol Publications, New Delhi. Pp. 12 to 14 & 35 to 152.
- Sharma, I. K. 1972. Ecological study of rest and roost behaviour of the peafowl *Pavo cristatus*. Birdwatchers. 12(6): 5-8.
- Saha, T.K. 1992. Biostatistics in Theory and Practice. Emkay Publications, Delhi. Pp. 55-67.
- Thirumurthi, S., Annamalai, R. and Gunasekharan, V. 1993. Effects of Industrialisation on the populations of peafowl *Pavo cristatus* Linn. In: Bird Conservation strategies for the Nineties and Beyond. (Ed. Abraham *et al.*), Bangalore. Pp. 77.

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ternate Nesting of Whitebellied Sea Eagle (*Haliaeetus leucogaster*) in Konkan, Maharashtra

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In Konkan the whitebellied sea eagle is fairly common throughout the coastline. Watching the soaring and gliding of this eagle is a beautiful experience. Since 1996 we have been studying this bird in the Districts of Ratnagiri and Sindhudurg (15° 35' to 18° 04' N and 73° 02' to 74° 13' E). We have located as many as 104 nests on the 285 km coastline of these two Districts.

As is well known, many large species of raptor have more than one nest, and they make use of them in alternate years. Sometimes, in spite of the other nests being present, they use the same one year after year (Brown 1997).

When we started this exercise on 12.2.1993, on a sandy beach at Guhagar (17° 30' N and 73° 11' E) 4 km in length and bordered by casuarina and coconut trees, we observed 3 nesting pairs with their active nests. One was at the south end of the beach on a horizontal branch of *Casuarina equisetifolia* at a height of about 30.5 m. The second was in a garden next to a house on a 440 m. long and 55 m. wide sandbar running between the sea and the mangroves. This plantation is more than 50 years old, having 97 small and big trees. The nest was again on a casuarina 30.5 m above ground. One adult bird was seen inside the nest and there was a considerable amount of droppings under the nest. 20 m

away from this nest there was an inactive nest at a height of 32 m. on a casuarina.

The position and sequence of nesting from 1992-93 and 1995-96 are indicated on the table given below.

List of Nests used in alternate years

Place	No. of Nests	Distance between 2 nests	Tree species
Murud MTDC	2	150	<i>Casuarina equisetifolia</i>
Anjarla	2	6	<i>Mangifera indica</i>
Harnai	2	80	<i>Casuarina equisetifolia</i>
Bag (Guhagar)	4	Given above	<i>Casuarina equisetifolia</i>
Guhagar	2	250	<i>Mangifera indica</i>
Palshet	2	30	<i>Casuarina equisetifolia</i>
Narvan	2	50	<i>Ficus bengalensis</i>
Rohile	2	1000	<i>Ficus bengalensis</i>
Rohile	-	-	<i>Casuarina equisetifolia</i>
Ambuvadi	2	Connected	<i>Ficus religiosa</i>
Varavade	2	22	<i>Mangifera indica</i>
Aare	2	14	<i>Casuarina equisetifolia</i>

Jaitapur	2	13	<i>Alstonia scholaris</i>
Kunkeshwar	2	2.5	<i>Casuarina equisetifolia</i>
Mithmumbri	2	300	<i>Casuarina equisetifolia</i>
Munge	2	30	<i>Casuarina equisetifolia</i>
Shiroda	2	100	<i>Casuarina equisetifolia</i>

All the nests had a diameter of 1 to 1.25 m and the distance between two nearest nests was 12 m and the longest distance between 2 nests was 318 m. Out of the 104 nests that we observed, 14 nesting pairs had more than one nest and used it in alternate years.

In our 5 years observations, we have never seen the sea eagle repairing either partly or fully any nest other than the occupied one in the same breeding season. Only in one place we had observed an eagle adding sticks to the old nest, but it suddenly abandoned it and built a new one. As far as we can judge, there is no definite sequence in using particular nests in any season.



Visit to Kanha National Park, Madhya Pradesh, India

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This checklist of birds is a welcome by-product of my visit to Kanha National Park (hereafter KNP) with M.Sc. final year students in January 2001. As part of the M. Sc. curriculum, students are taken on field trips to important national parks and sanctuaries to get an insight into the management of protected areas besides giving them an orientation in the field-based studies.

KNP is one of the foremost and famous national parks of the country. The name of the Park has been derived from the village Kanha, situated inside the National Park. The Park supports an admirable biodiversity. While the wildlife has its own charm the park's topography on its own has the potential for captivating you for life. It is regarded as a tiger land - home for more than 100 tigers, which is the flagship species of wildlife conservation projects of India. The park lies in the newly created state of Chhattisgarh, which was earlier in the state of Madhya Pradesh. Administratively, the park falls in Mandla and Balaghat districts and is situated about 1° south of tropic of cancer. It is a part of the central highlands in Maikal hills of Satpura, South of Narmada River. Kanha National Park is geographically situated between 22° 07' 22" 27' N latitudes and 80° 30' - 81° 03' E longitudes. The dumbbell shaped park consisting of two lobes, connected through comparatively narrow corridors, encompasses an area of 940 Sq. Km.

Kanha was established as Sanctuary in 1933 with an area of 232 Sq. Km, in 'Bangar' valley, similarly 'Supkhar' sanctuary was constituted in 1935 with an area of 300 Sq. Km, in Halon valley towards east of Kanha sanctuary. Later on Supkhar sanctuary was denotified in 1943 on account of alleged damage caused by wild animals to crops, domestic cattle and regeneration of forest species particularly Sal *Shorea robusta*. In 1955 the sanctuary was elevated to the status of National Park with an area of 446 Sq. Km. In 1973 the area of N P was further extended to 940 Sq. Km towards eastern side encompassing the area of erstwhile Supkhar sanctuary. Thus, the present day KNP encompasses a

compact and continuous area of 940 Sq. Km, including the area of both erstwhile, Supkhar and Banjar valley sanctuaries.

KNP was one among the first lot of nine tiger reserves selected in the country in 1973 with the launching of 'Project Tiger' to save the tiger in the wild. Under the directive policies of 'Project Tiger', each tiger reserve should have a core area in the centre surrounded by a buffer zone. Accordingly the entire area (940 Sq. Km.) was formed as the core area. Thus total area of Kanha Tiger Reserve is 1945 Sq. Km. (Core area = 940 Sq. Km. & Buffer zone = 1005 Sq. Km.) The core area is maintained as sanctum sanctorum. The buffer zone is a multiple land use area and comprises cultivated fields, villages, wastelands, roads and the forest. The forest area in the buffer zone is only 280 Sq. Km. The buffer zone is constituted as 'game reserve' under wildlife (P) Act 1972.

The park has rich flora of tropical moist deciduous forests categorized into sal forest, mixed forest, grasslands and wetlands. The distribution of sal and mixed forest is strongly correlated with topography. The valleys are dominated with pure chunks of sal. On slopes and plateaus, the proportion of sal reduces where it is replaced by mixed forest. Some of the mammalian species sighted were gaur *Bos gaurus*, wild dog *Cuon alpinus*, wild boar *Sus scrofa*, jungle cat *Felis chaus*, Rhesus macaque *Macaca mulatta*, langur *Presbytis entellus*, blackbuck *Antelope cervicapra*, sambhar *Cervus unicolor*, swamp deer *Cervus duvauceli*, cheetal *Axis axis* and barking deer *Muntiacus muntjak*.

A total number of 129 species of birds belonging to 46 families were sighted during the trip, among which some of the interesting species were common lora, gold fronted chloropsis, Tickell's flycatcher and Tickell's flowerpecker all of which I saw for the first time. While reports of the depleting vulture population are steadily increasing, we saw a nest of Indian whitebacked vulture with two chicks, which was an interesting sight as the parents

were busy feeding the chicks. On one occasion a flock of redvented bulbuls were seen feeding with house crows and white eyes. The feeding frenzy lasted for about an hour until the cacophonous flock of jungle babblers, which seemed to announce their presence also, disturbed them. The most common species were ashly drongo, house crow, redvented bulbul, grey hornbill, brown flycatcher and yellowcheeked tit to name a few. Among the uncommon species, some of them were emerald dove, gold fronted chloropsis, chestnutheaded bee-eater and wiretailed swallow. It can be concluded that the birdlife of KNP is quite rich and a total number of 260 species of birds are recorded from here till 1998 (Eric D'Cunha pers comm.). Though large numbers of tourists coming to KNP are keen birdwatchers, so far there has been no checklist published for ready reference.

Checklist of birds of Kanha National Park, Madhya Pradesh

Common Name	Scientific Name	Family			
Little grebe	<i>Podiceps ruficollis</i>	Podicipedidae	Common Sandpiper	<i>Tringa hypoleucos</i>	Charadriidae
Cormorant	<i>Phalacrocorax carbo</i>	Phalacrocoracidae	Indian River Tern	<i>Sterna aurantia</i>	Laridae
Indian Shag	<i>Phalacrocorax fuscicollis</i>	Phalacrocoracidae	Yellowlegged Green pigeon	<i>Treron phoenicoptera</i>	Columbidae
Little Cormorant	<i>Phalacrocorax niger</i>	Phalacrocoracidae	Blue Rock Pigeon	<i>Columba livia</i>	Columbidae
Grey Heron	<i>Ardea cinerea</i>	Ardeidae	Ring Dove	<i>Streptopelia decaocto</i>	Columbidae
Purple heron	<i>Ardea purpurea</i>	Ardeidae	Spotted Dove	<i>Streptopelia chinensis</i>	Columbidae
Pond Heron	<i>Ardeola grayii</i>	Ardeidae	Little Brown Dove	<i>Streptopelia senegalensis</i>	Columbidae
Cattle Egret	<i>Bubulcus ibis</i>	Ardeidae	Emerald Dove	<i>Chalcophaps indica</i>	Columbidae
Little Egret	<i>Egretta garzetta</i>	Ardeidae	Alexandrine Parakeet	<i>Psittacula eupatria</i>	Psittacidae
Painted Stork	<i>Mycteria leucocephala</i>	Ciconiidae	Roseringed Parakeet	<i>Psittacula krameri</i>	Psittacidae
Openbill Stork	<i>Anastomus oscitans</i>	Ciconiidae	Blossomheaded Parakeet	<i>Psittacula cyanocephala</i>	Psittacidae
Whitenecked Stork	<i>Ciconia episcopus</i>	Ciconiidae	Pied Crested Cuckoo	<i>Clamator jacobinus</i>	Cuculidae
Black Stork	<i>Ciconia nigra</i>	Ciconiidae	Common Hawk-Cuckoo	<i>Cuculus varius</i>	Cuculidae
White Ibis	<i>Threskiornis aethiopia</i>	Threskiornithidae	Crow-Pheasant or Coucal	<i>Centropus sinensis</i>	Cuculidae
Black Ibis	<i>Pseudibis papillosa</i>	Threskiornithidae	Scops Owl	<i>Otus scops</i>	Strigidae
Greylag Goose	<i>Anser anser</i>	Anatidae	Spotted Owlet	<i>Athene brama</i>	Strigidae
Ruddy Shelduck	<i>Tadorna ferruginea</i>	Anatidae	Indian Jungle Nightjar	<i>Caprimulgus indicus</i>	Caprimulgidae
Pintail	<i>Anas acuta</i>	Anatidae	House-Swift	<i>Apus affinis</i>	Apodidae
Common Teal	<i>Anas crecca</i>	Anatidae	Small Blue Kingfisher	<i>Alcedo atthis</i>	Alcedinidae
Spotbill Duck	<i>Anas poecilorhyncha</i>	Anatidae	Whitebreasted Kingfisher	<i>Halcyon smymensis</i>	Alcedinidae
Wigeon	<i>Anas penelope</i>	Anatidae	Chestnutheaded Bee-eater	<i>Merops leschenaulti</i>	Meropidae
Garganey	<i>Anas querquedula</i>	Anatidae	Small Green Bee-eater	<i>Merops orientalis</i>	Meropidae
Shoveller	<i>Anas clypeata</i>	Anatidae	Indian Roller	<i>Coracias bengalensis</i>	Coraciidae
Blackwinged Kite	<i>Elanus caeruleus</i>	Acciptridae	Hoopoe	<i>Upupa epops</i>	Upupidae
Pariah Kite	<i>Milvus migrans</i>	Acciptridae	Grey Hornbill	<i>Tockus birostris</i>	Bucerotidae
Indian Shikra	<i>Accipiter badius</i>	Acciptridae	Large Green Barbet	<i>Megalaima zeylanica</i>	Capitonidae
Crested Hawk-eagle	<i>Spizaetus cirrhatous</i>	Acciptridae	Crimsonbreasted Barbet	<i>Megalaima haemacephala</i>	Capitonidae
Greyheaded Fishing Eagle	<i>Ichthyophaga ichthyaetus</i>	Acciptridae	Lesser Goldenbacked Woodpecker	<i>Dinopium benghalense</i>	Picidae
Indian Whitebacked Vulture	<i>Gyps bengalensis</i>	Acciptridae	Yellowfronted Pied Woodpecker	<i>Picoides mahrattensis</i>	Picidae
Egyptian Vulture	<i>Neophron percnopterus</i>	Acciptridae	Pigmy Woodpecker	<i>Picoides nanus</i>	Picidae
Marsh Harrier	<i>Circus aeruginosus</i>	Acciptridae	Indian Pitta	<i>Pitta brachyura</i>	Pittidae
Crested Serpent Eagle	<i>Spilornis cheela</i>	Acciptridae	Swallow	<i>Hirundo rustica</i>	Hirundinidae
Kestrel	<i>Falco tinnunculus</i>	Falconidae	Wiretailed Swallow	<i>Hirundo smithii</i>	Hirundinidae
Red Jungle Fowl	<i>Gallus gallus</i>	Phasianidae	Grey Shrike	<i>Lanius excubitor</i>	Lanidae
Peafowl	<i>Pavo cristatus</i>	Phasianidae	Rufousbacked shrike	<i>Lanius schach</i>	Lanidae
Sarus Crane	<i>Grus antigone</i>	Gruidae	Brown Shrike	<i>Lanius cristatus</i>	Lanidae
Moorhen	<i>Gallinula chloropus</i>	Rallidae	Golden Oriole	<i>Oriolus oriolus</i>	Oriolidae
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	Jacanidae	Blackheaded Oriole	<i>Oriolus xanthomus</i>	Oriolidae
Bronzewinged Jacana	<i>Metopidius indicus</i>	Jacanidae	Black Drongo	<i>Dicrurus adsimilis</i>	Dicruridae
Blackwinged Stilt	<i>Himantopus himantopus</i>	Recurvirostridae	Grey or Ashy Drongo	<i>Dicrurus leucophaeus</i>	Dicruridae
Redwattled Lapwing	<i>Vanellus indicus</i>	Charadriidae	Whitebellied Drongo	<i>Dicrurus caerulescens</i>	Dicruridae
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	Charadriidae	Greater Racket-tailed drongo	<i>Dicrurus paradiseus</i>	Dicruridae
Greenshank	<i>Tringa nebularia</i>	Charadriidae	Brahminy Myna	<i>Sturnus pagodarum</i>	Sturnidae
			Pied Myna	<i>Sturnus contra</i>	Sturnidae
			Common Myna	<i>Acridotheres tristis</i>	Sturnidae
			Bank Myna	<i>Acridotheres ginginianus</i>	Sturnidae
			Jungle Myna	<i>Acridotheres fuscus</i>	Sturnidae
			Indian Tree Pie	<i>Dendrocitta vagabunda</i>	Corvidae
			House Crow	<i>Corvus splendens</i>	Corvidae
			Jungle Crow	<i>Corvus macrorhynchos</i>	Corvidae
			Pied Flycatcher-shrike	<i>Hemipus picatus</i>	Campephagidae
			Scarlet Minivet	<i>Pericrocotus flammeus</i>	Campephagidae
			Common Iora	<i>Aegithina tiphia</i>	Irenidae
			Goldfronted Chloropsis	<i>Chloropsis aurifrons</i>	Irenidae
			Redvented Bulbul	<i>Pycnonotus cafer</i>	Pycnonotidae
			Jungle Babbler	<i>Turdoides striatus</i>	Muscicapidae
			Brown Flycatcher	<i>Muscicapa latirostris</i>	Muscicapidae
			Redbreasted Flycatcher	<i>Muscicapa parva</i>	Muscicapidae
			Little Pied Flycatcher	<i>Muscicapa westermanni</i>	Muscicapidae

Whitebrowed Blue Flycatcher	<i>Muscicapa supercilialis</i>	Muscicapidae	Grey Tit	<i>Parus major</i>	Paridae
Tickell's Blue Flycatcher	<i>Muscicapa tickelliae</i>	Muscicapidae	Yellowcheeked Tit	<i>Parus xanthogenys</i>	Paridae
Verditer Flycatcher	<i>Muscicapa thalassina</i>	Muscicapidae	Chestnutbellied Nuthatch	<i>Sitta castanea</i>	Sittidae
Greyheaded Flycatcher	<i>Culicicapa ceylonensis</i>	Muscicapidae	Velvetfronted Nuthatch	<i>Sitta frontalis</i>	Sittidae
Plain Wren-Warbler	<i>Prinia subflava</i>	Muscicapidae	Tawny Pipit	<i>Anthus campestris</i>	Motacillidae
Ashy Wren-Warbler	<i>Prinia socialis</i>	Muscicapidae	Yellowheaded Wagtail	<i>Motacilla citreola</i>	Motacillidae
Tailor Bird	<i>Orthotomus sutorius</i>	Muscicapidae	Grey Wagtail	<i>Motacilla cinerea</i>	Motacillidae
Magpie-Robin	<i>Copsychus saularis</i>	Muscicapidae	White Wagtail	<i>Motacilla alba</i>	Motacillidae
Shama	<i>Copsychus malabaricus</i>	Muscicapidae	Large Pied Wagtail	<i>Motacilla maderaspatensis</i>	Motacillidae
Black Redstart	<i>Phoenicurus ochruros</i>	Muscicapidae	Tickell's Flowerpecker	<i>Dicaeum erythrorhynchos</i>	Dicaeidae
Dark-grey Bushchat	<i>Saxicola ferrea</i>	Muscicapidae	Purple Sunbird	<i>Nectarinia asiatica</i>	Nectariniidae
Indian Robin	<i>Saxicoloides fulicata</i>	Muscicapidae	White-eye	<i>Zosterops palpebrosa</i>	Zosteropidae
Blue Rock Thrush	<i>Monticola solitarius</i>	Muscicapidae	House Sparrow	<i>Passer domesticus</i>	Ploceidae
Orangeheaded Pied Ground Thrush	<i>Zoothera citrina</i>	Muscicapidae			



Avifauna in and around Jodhpur city, Rajasthan, India

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Introduction

The Indian region is incredibly rich in bird life, being a megadiversity country. Over 1200 species of the world's 9,600 species, are found in this region (Ali & Ripley, 1987). Birds have always fascinated man for their ability to fly, and their functional role in the ecosystem as pollinators and scavengers.

The city of Jodhpur (26° 19'N and 73° 8' E) is situated in the eastern fringes of the Great Indian Desert. About 158 species of birds belonging to 44 Families were recorded during the seven years long-term demographic and eco-behavioural comparative study on Hanuman langurs (*Semnopithecus entellus*) at Kumbhalgarh Wildlife Sanctuary and Jodhpur. The habitat in and around Jodhpur city is mainly open scrub forest with patches of crop fields, farms, orchards and wetlands. The climate of this area is a typical hot desert type. During the summer the temperature is between 20°C to 45°C and may rise upto 49°C; the minimum temperature recorded during our study was 3°C. Humidity values vary between 27% and 66%. The annual average rainfall is 300 mm distributed over 20 rainy days. This wide range of climatical conditions have formed different types of microhabitats, which support a variety of aquatic and terrestrial birds. Vegetation of the area is typical of desertic scrub forest type represented by *Acacia senegal*, *Euphorbia caducifolia*, *Ziziphus nummularia*, *Grewia tenesc*, *Salvadora persica*, *Capparis sepearaia*, *Anogeissus pendula*, *Maytenus emarginatus* and *Commiphora wightii*. But, all these native flora are facing a threat from the spreading dense *Prosopis juliflora* on the banks of water reservoirs and the plains. Some good grassland and wetland patches were also present to support large numbers of migratory and aquatic avifauna. The main fauna of the area includes, hyaena (*Hyaena hyaena*), Indian wolf (*Canis lupus*), jackal (*Canis aureus*), Hanuman langurs (*Semnopithecus entellus*), Porcupine (*Hystrix indica indica*), Blue bull (*Boselaphus tragocamelus*) Jungle cat (*Felis chaus*) etc.

Methodology

I have been monitoring bird diversity in and around Jodhpur since 1994. Most of the birds were observed during biannual census and intensive survey of Hanuman langur population at Jodhpur. Besides this, birds were recorded by point count methods in the major vegetation types as well as at water bodies (lakes, ponds

and dams) and in agro-ecosystems for the over six years. Apart from this, chance encounters were also recorded. All identifications were based on field guides by Woodcock (1980), Ali and Ripley (1983) and Grewal (1995) and only those species with confirmed identification are given in this paper. Birds were sighted and identified with the help of a pair of binoculars (20 X 50 and 7 X 35).

Result and Discussion

Out of 79 families of avifauna present in the Indian sub-continent, 44 families were observed in the present study. A total 158 species of birds were observed belonging to 44 families as given in Table 1.

Muscicapidae (19 species), Anatidae (15 species) and Accipitridae (12 species) were the top-raking families representing 29% of the total number of species available in this area. 17 families (listed in Table 1) were represented by single species only. Six species of vultures were observed during the period of study, of which 4 are resident and two migratory. The most common and abundant of these seemed to be the Indian longbilled vulture (*Gyps indicus*) with fairly good breeding population in and around the city in the rock cliffs, followed closely by the whitebacked vulture (*Gyps bengalensis*) and Egyptian vulture (*Neophron percnopterus*). The king vulture (*Sarcogyps calvus*) appeared to be present in low numbers. Griffon vulture (*Gyps fulvus*) and cinereous vulture (*Aegypius monachus*) are winter visitors, and arrived every year in the month of November and left in March.

Table 1 : Checklist of Birds Found in and around Jodhpur with status

Family	Name	Scientific Name	Status
Podicipedidae	Little grebe	<i>Podiceps ruficollis</i>	C
Phalacrocoracidae	Large cormorant	<i>Phalacrocorax carbo</i>	R
Phalacrocoracidae	Indian shag	<i>P. fuscicollis</i>	C
Phalacrocoracidae	Little cormorant	<i>P. niger</i>	C
Phalacrocoracidae	Darter	<i>Anhinga rufa</i>	UC
Ardeidae	Gray heron	<i>Ardea cinerea</i>	UC
Ardeidae	Pond heron	<i>Ardeola grayii</i>	C
Ardeidae	Cattle egret	<i>Bubulcus ibis</i>	C

Ardeidae	Large egret	<i>Ardea alba</i>	C	Charadriidae	Wood sandpiper	<i>T. glareola</i>	C
Ardeidae	Medium egret	<i>Egretta intermedia</i>	R	Charadriidae	Common sandpiper	<i>T. hypoleucos</i>	C
Ardeidae	Little egret	<i>E. garzetta</i>	C	Charadriidae	Common snipe	<i>Gallinago gallinago</i>	C
Ardeidae	Night heron	<i>Nycticorax nycticorax</i>	R	Laridae	Whiskered tern	<i>Chlidonias hybrida</i>	R
Coconiidae	Painted stork	<i>Mycteria leucocephala</i>	UC *	Laridae	India river tern	<i>Sterna aurantia</i>	C
Coconiidae	Black-necked stork	<i>Xenorhynchus asiaticus</i>	R*	Pteroclididae	Indian sandgrouse	<i>Pexustus</i>	UC
Coconiidae	Openbill stork	<i>Anastomus oscitans</i>	R	Pteroclididae	Painted sandgrouse	<i>Pterocles indicus</i>	R
Threskiornithidae	White ibis	<i>Threskiornis aethiopica</i>	C	Columbidae	Blue rock pigeon	<i>Columba livia</i>	VC
Threskiornithidae	Glossy ibis	<i>Plegadis falcinellus</i>	R	Columbidae	Indian ring dove	<i>Streptopelia decaocto</i>	VC
Threskiornithidae	Spoonbill	<i>Platalea leucorodia</i>	C	Columbidae	Red turtle dove	<i>S. tranquebarica</i>	C
Phoenicopteridae	Flamingo	<i>Phoenicopteropus roseus</i>	UC	Columbidae	Little brown dove	<i>S. senegalensis</i>	C
Anatidae	Greylag goose	<i>Anser anser</i>	R	Psittacidae	Roseringed parakeet	<i>P. krameri</i>	VC
Anatidae	Barheaded goose	<i>Anser indicus</i>	R	Cuculidae	Pied crested cuckoo	<i>Clamator jacobinus</i>	UC
Anatidae	Common Shelduck	<i>Tadorna tadorna</i>	R	Cuculidae	Koel	<i>Eudynamys scolopacea</i>	VC
Anatidae	Lesser whistling teal	<i>Dendrocygna javanica</i>	C	Cuculidae	Crow-pheasant	<i>Centropus sinensis</i>	C
Anatidae	Pintail	<i>Anas acuta</i>	C	Strigidae	Great horned or eagle owl	<i>Bubo bubo</i>	R
Anatidae	Common teal	<i>A. crecca</i>	C	Strigidae	Spotted owl	<i>Athene brama</i>	VC
Anatidae	Spotbilled duck	<i>A. poecilorhyncha</i>	C	Caprimulgidae	Common Indian nightjar	<i>Caprimulgus asiaticus</i>	C
Anatidae	Mallard	<i>A. platyrhynchos</i>	UC	Apodidae	House swift	<i>Apus affinis</i>	C
Anatidae	Gadwall	<i>A. strepera</i>	UC	Alcedinidae	Lesser pied kingfisher	<i>Ceryle rudis</i>	UC
Anatidae	Wigeon	<i>A. penelope</i>	C	Alcedinidae	Common kingfisher	<i>Alcedo atthis</i>	C
Anatidae	Shoveller	<i>A. clypeata</i>	C	Alcedinidae	Whitebreasted kingfisher	<i>Halcyon smymensis</i>	VC
Anatidae	Common pochard	<i>Aythya ferina</i>	UC	Meropidae	Bluetailed bee-eater	<i>Merops philippinus</i>	C
Anatidae	White-eyed pochard	<i>A. nyroca</i>	R	Meropidae	Blue cheekd bee-eater	<i>M. sperciliosus</i>	R
Anatidae	Tufted duck	<i>A. fuligula</i>	C	Meropidae	Green bee-eater	<i>M. orientalis</i>	C
Anatidae	Cotton teal	<i>Nettapus coromandelianus</i>	UC	Coraciidae	Indian roller	<i>Coracias benghalensis</i>	C
Accipitridae	Blackwinged kite	<i>Elanus caeruleus</i>	UC	Upupidae	Hoopoe	<i>Upupa epops</i>	VC
Accipitridae	Pariah kite	<i>Milvus migrans govinda</i>	C	Capitonidae	Coppersmith	<i>M. haemacephala</i>	UC
Accipitridae	Shikra	<i>Accipiter badius</i>	UC	Picidae	Wryneck	<i>Jynx torquilla</i>	C
Accipitridae	Eastern steppe eagle	<i>Aquila rapax</i>	UC	Picidae	Lesser goldenbacked woodpecker	<i>Dinopium benghalense</i>	VC
Accipitridae	Great spotted eagle	<i>A. clanga</i>	UC	Picidae	Yellowfronted pied woodpecker	<i>Picoides mahrattensis</i>	C
Accipitridae	King vulture	<i>Sarcogyps calvus</i>	R*	Alaudidae	Redwinged bush lark	<i>Mirafra erythroptera</i>	C
Accipitridae	Cinereous vulture	<i>Aegypius monachus</i>	R*	Alaudidae	Ashycrowned finch lark	<i>Eremopterix grisea</i>	UC
Accipitridae	Griffon vulture	<i>Gyps fulvus</i>	C	Alaudidae	Rufostailed finch lark	<i>Ammomanes phoenicurus</i>	C
Accipitridae	Indian longbilled vulture	<i>Gyps indicus</i>	UC*	Alaudidae	Crested lark	<i>Galerida cristata</i>	R
Accipitridae	Indian whitebacked vulture	<i>Gyps bengalensis</i>	UC*	Alaudidae	Eastern Skylark	<i>Alauda gulgula</i>	R
Accipitridae	Scavenger vulture	<i>Neophron percnopterus</i>	C	Hirundinidae	Dusky crag martin	<i>Hirundo concolor</i>	C
Accipitridae	Pale-harrier	<i>Circus macrourus</i>	R	Hirundinidae	Plain sand martin	<i>Riparia paludicola</i>	R
Falconidae	Kestrel	<i>F. tinnunculus</i>	C	Hirundinidae	Wiretailed swallow	<i>H. smithii</i>	VC
Phasianidae	Grey partridge	<i>Francolinus pondicerianus</i>	VC	Hirundinidae	Indian cliff swallow	<i>H. fluvicola</i>	R
Phasianidae	Indian peafowl	<i>Pavo cristatus</i>	VC	Hirundinidae	Redrumped swallow	<i>H. daurica</i>	C
Gruidae	Sarus crane	<i>Grus antigone</i>	R*	Laniidae	Grey shrike	<i>Lanius excubitor</i>	VC
Gruidae	Demoiselle crane	<i>Anthropoides virgo</i>	VC	Laniidae	Baybacked shrike	<i>L. vittatus</i>	C
Rallidae	Whitebreasted waterhen	<i>Amauromis phoenicurus</i>	C	Laniidae	Rofousbacked shrike	<i>L. schach</i>	C
Rallidae	Moorhen	<i>Gallinula chloropus</i>	VC	Dicruridae	Black drongo	<i>Dicrurus adsimilis</i>	VC
Rallidae	Purple moorhen	<i>Porphyrio porphyrio</i>	UC	Sturnidae	Brahminy myna	<i>Sturnus pagodarum</i>	VC
Rallidae	Coot	<i>Fulica atra</i>	VC	Sturnidae	Rosy pastor	<i>S. roseus</i>	C
Jacaniidae	Pheasant tailed jacana	<i>Hydrophasianus chirurgus</i>	UC	Sturnidae	Starling	<i>S. vulgaris</i>	UC
Recurvirostridae	Blackwinged stilt	<i>Himantopus himantopus</i>	C	Sturnidae	Pied myna	<i>S. contra</i>	VC
Burhinidae	Stone curlew	<i>Burhinus oedicephalus</i>	R	Sturnidae	Common myna	<i>Acridotheres tristis</i>	VC
Charadriidae	Redwattled lapwing	<i>Vanellus indicus</i>	V	Sturnidae	Bank myna	<i>A. ginginianus</i>	C
Charadriidae	Yellow-wattled lapwing	<i>V. malabaricus</i>	R	Corvidae	House crow	<i>Corvus splendens</i>	VC
Charadriidae	Little ringed plover	<i>Charadrius dubius</i>	R	Corvidae	Jungle crow	<i>C. macrorhynchos</i>	C
Charadriidae	Blacktailed godwit	<i>Limosa limosa</i>	UC	Corvidae	Raven	<i>C. corax</i>	R
Charadriidae	Curlew	<i>Numenius arquata</i>	R	Campephagidae	Common wood shrike	<i>Tephrodornis pondicerianus</i>	C
Charadriidae	Red shank	<i>Tringa totanus</i>	UC	Campephagidae	Small minivet	<i>Pericrocotus cinnamomeus</i>	R
Charadriidae	Green-shank	<i>T. nebularia</i>	UC				

Pycnonotidae	White cheeked bulbul	<i>Pycnonotus leucogenys</i>	C	Ploceidae	Yellowthroated sparrow	<i>Petronia xanthocollis</i>	C
Pycnonotidae	Redvented bulbul	<i>Pycnonotus cafer</i>	VC	Ploceidae	Baya	<i>Ploceus philippinus</i>	UC
Muscicapidae	Yelloweyed babbler	<i>Chrysomma sinense</i>	UC	Ploceidae	Green munia	<i>Estrilda formosa</i>	R
Muscicapidae	Common babbler	<i>Turdoides caudatus</i>	C	Ploceidae	White throated munia	<i>Lonchura malabarica</i>	R
Muscicapidae	Large grey babbler	<i>T. malcolmi</i>	R	Ploceidae	Spotted munia	<i>L. punctulata</i>	UC
Muscicapidae	Redbreasted flycatcher	<i>Muscicapa parva</i>	UC	Emberizidae	Greynecked bunting	<i>Emberiza buchanani</i>	UC
Muscicapidae	Fantail flycatcher	<i>Rhipidura aureola</i>	R				
Muscicapidae	Rufous fronted wren-warbler	<i>Prinia buchanani</i>	R				
Muscicapidae	Tailor bird	<i>Orthotomus sutorius</i>	C				
Muscicapidae	Indian great reed warbler	<i>Acrocephalus stentoreus</i>	C				
Muscicapidae	Desert warbler	<i>Sylvia nana</i>	R				
Muscicapidae	Lesser whitethroat	<i>Sylvia curruca</i>	R				
Muscicapidae	Chiff-chaff	<i>Phylloscopus collybita</i>	UC				
Muscicapidae	Rufous chat	<i>Erythropgia galactotes</i>	R				
Muscicapidae	Bluethroat	<i>Erithacus svecicus</i>	UC				
Muscicapidae	Black redstart	<i>Phoenicurus ochruros</i>	C				
Muscicapidae	Brown rock chat	<i>Cercomela fusca</i>	VC				
Muscicapidae	Pied bush chat	<i>Saxicola caprata</i>	C				
Muscicapidae	Desert wheatear	<i>Oenanthe deserti</i>	C				
Muscicapidae	Pied chat	<i>O. picata</i>	R				
Muscicapidae	Indian robin	<i>Saxicoloides fulicata</i>	VC				
Motacillidae	Tawny pipit	<i>A. campestris</i>	UC				
Motacillidae	Tree pipit	<i>A. trivialis</i>	R				
Motacillidae	Yellow wagtail	<i>Motacilla flava</i>	C				
Motacillidae	Yellowheaded wagtail	<i>M. citreola</i>	VC				
Motacillidae	Grey wagtail	<i>M. cinerea</i>	C				
Motacillidae	White wagtail	<i>M. alba</i>	UC				
Motacillidae	Large pied wagtail	<i>M. maderaspatensis</i>	C				
Nectariniidae	Purple sunbird	<i>Nectarinia asiatica</i>	VC				
Zosteropidae	White-eye	<i>Zosterops palpebrosa</i>	C				
Ploceidae	Indian house sparrow	<i>Passer domesticus indicus</i>	VC				

R – Rare; UC – Uncommon; C – Common; VC – Very common

* - Listed in threatened birds of the world (IUCN red list – 2000)

Acknowledgement :

I would like to thank Prof. S.M. Mohnot, Director, Indo-US Primate Project, Dr. A. Purohit, Head, Dr. L.S. Rajpurohit, Department of Zoology, J.N.V. University, Jodhpur for their support. Thanks are due to the State Forest Department staff and officials of Jodhpur. I am thankful to Mr. Mayank, Tejveer and Bundu Khan for their help during computation of this work.

References :

- Ali, S. and S.D. Ripley (1983). Handbook of Birds of India and Pakistan, Bombay Natural History Society, Oxford University Press.
- Ali, S. and S.D. Ripley (1987). Compact Handbook of the Birds of India, Pakistan, together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. Oxford University Press, New Delhi, P. 737+104 plates.
- Birdlife International (2000). Threatened Birds of the world. Barcelona and Cambridge, UK : Lynx Edition and Birdlife International.
- Grewal, Bikram, S. Monga and G. Wright (1995). Birds of the Indian subcontinent, Odyssey. Hongkong, P. 193.
- Woodcock, M. 1980. Collins handguide to the birds of the Indian sub-continent. St. Jame's palace, London, P. 176.



A Trip to Kutch in North East Gujarat

SNEHAL PATEL, Nature Club Surat, 81, Sarjan Society, Surat 395 007

Last month a few members of our club visited the grasslands of north east Gujarat. We had read a lot about the bird life of this area. The train journey took us through the region of the worst affected area of 26th January earthquake. Lots of villages were still in ruins, one can see tents pitched all over the place.

The trip from Bhuj onwards was by jeep. Due to good rainfall this year the area was lush green and the climate was pleasant. There are very few trees in this area, mainly date palms.

The grasslands were absolutely plain with about 50 cm high grass, scanning with binoculars we could spot the great Indian bustard one of the most endangered birds of our country. Its long white neck was projecting out from the green grass about 500m away. The excitement among us was greater than any of our earlier birding experience.

In the two hours before it got dark on the first day of our birding in this grassland we could not believe that we saw nine great Indian bustards, four males and five females. One of the males had a very long white pouch on the neck, which was almost touching the ground. The females were busy looking for insects in the fields. At one place we saw five birds at a time.

The other interesting bird we saw on this day was black partridge. I would rather call this a black beauty, What a wonderful bird ! always seen giving out calls from a high land mark which can be

a tree top, mud embankment or hedge too. It was a very wonderful call which we could easily tape (will be recorded in our volume III of Indian bird calls) with a parabola disc. The grassland was full of birds, insects and butterflies.

The presence of lesser florican was indicated by the sound we heard of its wing beating. To see the florican one has to locate the direction from which the sound 'TER -R-R' is coming and keep looking for about 5 minutes. Suddenly a very sleek bird with long neck will come vertically up about one meter from the green grass and fall back at the same place. It is like a child jumping on a trampoline and screaming with joy. We have observed that when the florican jumps, its face is always towards the direction from which the wind is blowing. I presume this is essential for the bird to keep itself in balance during the high jumps.

I had seen this bird earlier in Sailane Sanctuary, M.P. Recently there was a report of this sanctuary being denotified as half of the grassland is now under cultivation. The first day of our bird watching ended observing a moth, which used to hover like a humming bird and suck nectar from flowers, unlike the butterflies which have to land, and then suck the nectar. The moth's large eyes shined like amber. It had a pink glow when the beam of a torch light was reflected in it. The moth's hovering flight kept us watching them till midnight. Later at home it was identified as the humming bird moth.

Next morning we went for birdwatching in the Narayan Sarovar area, here the area being saline and with the sea nearby we saw plovers, stints, curlews and blackwinged stilts. It had started raining and the dirt road got muddy, also from morning the jeep had its battery down and it was a push start vehicle. Our bird watching had been restricted to roadside birdwatching due to rain. Although the road had very little traffic we saw dead bodies of hedgehog, nightjar, common babbler, small Indian civet and a ribbon snake (which was completely flattened and has ended up in our Natural History Museum). The same day we saw a Baluchistan grey shrike for the first time. The bird was sitting on a dead road side tree just 30 feet away. We observed it for more than 10 minutes as it should not be here according to IG. The details of this bird were noted and on reaching home, we referred in Handbook and found that it was indeed a Baluchistan grey shrike. The other interesting birds were flocks of whimbrels and sandgrouses. We also enjoyed observing the singing bush lark, hovering about 50 feet above our head and uninterruptedly singing very sweet songs. One can listen to this in Nature Club Surat's call of Indian Birds volume II.

On the third day we went back to the grassland but it was muddy and the jeep used to skid. Occasionally we had to push it out. In between we saw two bustards gradually moving around in a field and at the same time we were lucky to see a florican making its

ritual jumps in the background of the two majestic birds. In the binocular's field of vision there were this two bustards and the florican slightly behind hopping up occasionally. It was a thrilling sight to see the two endangered birds in the same view. Very poor light and rain did not allow us to freeze this memorable view on film. Behind us about 300 m. away we could see the long neck of a male bustard above the green grass. Its body was below grass level. The horizon had dark rain clouds which gave a dramatic look to the whiteness of the birds.

Back into the jeep and skidding around it landed in a ditch. We just missed toppling on the side. Our half an hour effort could not push it out. All this was being watched by a giant bluebull male (he looked more black than blue) from a safe distance. After some time he suddenly jumped and started running. We could not understand this move, but shortly after we saw a white animal like an overgrown alsatian dog watching us from behind a bush and then started moving in the direction in which the bluebull moved. It took some time for us to realise that we were watching a wolf !. This was our first wolf sighting in life and that too in the wild.

Time was running out as we had to reach back to catch our train. Jeep did not want to move. We had to abandon it and started walking to the nearest roadhead about 10 kms. away.



Pattern and Nesting period of Indian Skimmer in National Chambal Sanctuary

RAJEEV CHAUHAN, Secretary General, Society for Conservation of Nature, 576, Karamganj, Punjabi Colony, Etawah 206 001, Uttar Pradesh, India

The Indian skimmer (*Rynchops albicollis*) is a resident species of larger rivers in northern and central India, particularly the Indus, Ganges, Brahmaputra and Godavari river systems (Ali 1996). Indian Skimmer is a globally threatened species (Grimmett *et al.* 1998) and under Schedule I of the Indian Wildlife (Protection) Act, 1972. Recently, ecological studies have not been conducted on this species, and information is present only as sighting records (e.g. Sangha *et al.* 1998, Kaur 1999, Sundar 2000). Flocking pattern and nesting season of Indian skimmers in National Chambal Sanctuary (NCS) will be discussed in this note.

I visited NCS irregularly between 1996 to 2001, covering the area from Pinahat to Shergarh Ghat, a stretch of about 165 km along the river Chambal and 50 km along the river Yamuna, both major tributaries of the Ganges, under a project funded by the Council of Science and Technology (Narain & Chauhan 1999). For survey, motor boat, row boat and motor bike were used. Whenever Indian skimmers were encountered, number of individuals, location, habitat and nesting (if nest observed) were noted.

In five years, 31 flocks were recorded, with flock size varying between four to 248 individuals (mean 70.58 ± 73.13 (SD)). Flock size of Indian skimmer was significantly different in winter and summer ($\chi^2=5$, $df=1$, $p<0.05$). Nesting was seen to occur between April and June.

They were using small to large sandbars or islands for roosting and small to large islands for nesting. River Chambal was famous for sand, Pinahat, Jawra Ghat, Kyonri Ghat, Nandgawan, Murong, Baroli, Barai and Udi Ghat were famous for sand mining, so many islands were found at that time. As the sand mining stopped since

1998, no islands were formed. This reduced the nesting habitat for skimmers. Predators come easily on connected sandbars, and hence skimmers do not prefer sandbars for nesting. After 1998, islands were observed below the confluence, or at the confluence, of Yamuna and Chambal rivers, which were used by skimmers for nesting. Now it is an urgent need to study the impact of sand mining on the nesting habitat of Indian skimmers.

Dams, barrages and water upliftment projects are causes of water scarcity in rivers. Confluences are deep with plenty of fish, and the water flow helps to make islands in these areas. Food availability is known to be a principal cause for flocking in birds (Newton 1998) and it may be the reason for flocking in Indian skimmers. According to Grimmett *et al.* (1998), nesting in Indian skimmers occurs from March to May, while here it occurred upto June. This may be possibly due to geographical location.

Acknowledgement

These observations were carried out while doing field work for the project funded by CST (U.P.) Lucknow to Dr. S. Narain. Permits to visit the Sanctuary were kindly given by Chief Wildlife Warden, U.P. Thanks are due to the Sanctuary staff for their cooperation and help during the field work, and to K. S. Gopi Sundar for discussion and literature.

References

- ALI, S. (1996): The Book of Indian Birds. Bombay Natural History Society, Oxford University Press, Bombay.
- ANON (1997): The Wildlife (Protection) Act 1972. Natraj Publishers, Dehradun.

- GRIMMETT, R.; C. INSKIPP & T. INSKIPP (1998): Birds of the Indian Subcontinent. Oxford University Press.
- KAUR, J. (1999): Indian Skimmer in Rajasthan. Newsletter for Birdwatchers 39: 12.
- NARAIN, S. & R. CHAUHAN (1999): Studies on the limnology of Panchnada with special reference to pollution and eutrophication. Report Council of Science and Technology, Project no. CST/SERC/33/95.
- NEWTON, I. (1998): Population limitation in birds. Academic Press, London.
- SANGHA, H.S. & M. KULSHRESTHA (1998): Sightings of Indian Skimmer (*Rynchops albigollis*) in Rajasthan far from its fluvial habitat. Newsletter for Birdwatchers 38: 86.
- SUNDAR, K.S.G. (2000): Indian Skimmers *Rynchops albigollis* in Rajasthan - further records. Newsletter for Birdwatchers 40:55-56.

CORRESPONDENCE

SIGHTING OF VULTURES. A.M.K. Bharos, B-101, Gayathrinagar, PO : Shankernagar, Raipur CG. 492 007

The Indian white backed vulture (*Gyps benghalensis*) and other vultures have become so rare that, they have totally disappeared from certain areas, even in this region, and sighting of even a solitary bird, causes a lot of excitement.

In the recent past following sightings were recorded:

On 7 October 2001 a gathering of 18 birds was observed soaring near village Shirpur, Baghnadi, situated on Raipur – Nagpur road (NH-6). This gathering comprised 18 birds, out of which, 16 were Indian whitebacked vultures, a king vulture and one was possibly an Indian longbilled vulture. They were moving away and a few of them were in the process of descending, suggesting the presence of a carcass and more birds there.

Earlier in the month of March 2001, during survey of IBA sites, a nesting colony of Indian whitebacked vultures, with four active nests was located, near village Rampur inside Barnawapara Wildlife Sanctuary, in Raipur district. CG. Around this locality a gathering of 16 / 17 birds is regularly seen.

NOTES ON ADJUTANT STORKS AND BARHEADED GEESE IN NORTH KARNATKA. Gurunath Desai, 1st floor, 31, Ashok Nagar, Hubli 580 032

Adjutant Stork at Honnapur Tank

On Saturday the 9th December 2001, I with my birder friend Mr. Prakash Tonshal were on a preliminary survey of migratory waterfowl of Dharwad and Haveri districts. At 11.00 a.m. while surveying Honnappur tank (Haveri Dist. 35 km. from Hubli), I spotted a solitary lesser Adjutant stork (*Leptoptilos javanicus*). Since this was my first sighting of this highly endangered species, to be absolutely certain, I referred to Salim Ali's Book of Indian birds and confirmed the field characters. Zooming in my Samsung binoculars, I noted the glossy metallic back, white underparts and yellow leathery neck.

The lesser adjutant is a rather ugly looking bird with an air of perpetual sadness about it. Oldtime birders recall that a solitary lesser adjutant used to be spotted infrequently around Honnapur lake. With that in mind I had kept searching for this stork for the past 5 years.

I observed the stork from a distance of 50m. but could not distinguish whether it was in breeding or non-breeding plumage. It was feeding on the margins of the lake. Keeping it company were a flock of 14 painted storks. Coot, cotton teal, dabchick, bronzewinged jacana, small blue kingfisher, pied kingfisher were the other birds seen at the lake.

Drying up important wetlands in North Karnataka

Continuing our survey we then visited the Naregal & Heggari tank in Haveri district. Both these tanks are very famous for attracting large congregations of migratory birds. Barheaded geese, brahminy duck, shoveller, common pochard, common teal, tufted pochard, gadwall, wigeon, garganey are the waterfowl that take refuge in these lakes during winter along with other shore birds like common sandpiper, wood sand piper, black tailed godwit, snipes, stilts and wagtails. This year due to failure of monsoon all these lakes have dried up, resulting in the non-arrival of wintering waterfowl.

With great sadness we watched the dried up bottom of Naregal lake. Ever an optimist and not one to lose heart, I scanned the other end of the lake only to be greeted by the spectacular sight of demoiselle cranes roosting in the afternoon. The demoiselle is one of the most elegant and charming cranes. The V formation flight of the demoiselle is indeed a sight to behold.

Barheaded geese at Magadi

On 12th December 2001, I received a phone call from Shri Vijay Mohan Raj, DCF, Gadag, requesting our birding group to be present at Magadi lake to take the winter census. Accompanied by Mr. Prakesh Tonshal, we arrived at the lake on 16th December 2001, at 10.00 a.m. After the dismal scenario at Naregal & Heggari lake we were not expecting much from Magadi lake, so it was a pleasant surprise to be greeted by three large flocks of bar headed geese. Proceeding to the other side of the lake we spotted 6 brahminy ducks and 3 common teals feeding in the lake. A long and narrow earthen embankment built by the forest dept. was the perching post for a flock of black ibis (41 Nos.) and 3 river terns, 3 open billed storks, 6 comb ducks (no adult males with prominent comb) 40 cattle egrets, 3 wooly necked storks were also using this embankment as their perching place.

We started our annual ritualistic barheaded geese count and abandoned the exercise as counting individual birds would take most of our time. Instead, using block method we estimated the population to be 3000 +. We were told that the number swells to 6000 + in the evenings. The high number of barheaded geese this year is attributed to the concentration of these geese at Magadi lake due to the drying up of Naregal tank, their traditional haunt.

Magadi lake has two interesting points to note. It is like any other village lake with typical profile and vegetation. Yet there is complete absence of little grebes, one of our commonest birds in all village tanks. Another point of interest is the absence of wintering waders (a few littleringed plovers and single snipe) in spite of having a gradually receding lake shore with soft and moist mud, grasslands, islands and sandbars habitat which are conducive for waders.

Shree Vijay Mohan Raj the dynamic DCF of Gadag has put in considerable effort towards conservation of this wetland. He is actively interacting with the local Yuva Mandal who are evincing much interest in the lake and the birds therein. This augurs well for the birds.

The forest dept. has made a mini-garden and has put benches for the avid birdwatchers and for the benefit of laymen put up a large board with painting and description of the birds visiting Magadi. Wish we had more officers like Vijay Mohan !

COMMENTS ON THE NEWSLETTER. Aasheesh Pittie, 8-2-545 Road No. 7, Banjara Hills, Hyderabad 500034, India

The Newsletter for September-October 2001, Vol.41, No. 5 arrived yesterday. As usual, very enjoyable and informative.

Snehal Patel's article, on birdwatching in Gujarat, makes great reading. I have witnessed similar behaviour of Yellow-wattled lapwings near Hyderabad. They just won't get off the road. I wonder what the reason is Snehal's pictures of drongo perched on sheep might make an interesting cover for a future issue of the Newsletter.

Ameen Ahmed and Harish Bhat's article is very well written. Yet I wonder whether their use of "rain forest," "evergreen forest slopes" and "moist deciduous forest", to describe the same tract of habitat is correct.

R.N. Desai and G.S. Kallur's note on birds of Dharward records the sighting of "Nine adult great whitebellied herons along with four purple herons. (2A + 2Juv)". I have my reservations about this identification <*Ardea insignis*> has a distribution in NE India. A solitary record from Point Calimere by Sugathan et al., (1987, JBNHS 84(1): 206-207) also seems doubtful to me, even though they say that, "While driving along the Eastern side of the sanctuary Dr. Salim Ali identified one bird among a mixed flock of egrets and grey herons at a drying water hole as <*Ardea insignis*>. During 1983 December again it was recorded". Is it presumptuous to deduce that Salim Ali would have published that record had he been really confident about it? They were after all driving past the mixed flock when they saw the bird, which is not an easy situation for identification. The authors of the present paper should try and be extra vigilant for this species (as other birders in that area) in future. Dr. Uttangi's comments on this might shed some light.

S. S. Mahesh's short communication on Blackheaded Munias in Bareilly has me foxed. According to Compact Handbook (Ali & Ripley, 1987) these birds should have black under tail coverts. Mahesh reports them as "deep reddish brown" on the two birds he saw. If the birds he saw had been dyed, then the white of the breast and sides would also have taken the colour. This does not seem to be the case. Is there an intermediate plumage between that of the juvenile and the adult that has not been recorded before?

LAST CALL OF THE PARADISE FLYCATCHER.

Dr. Arunachalam Kumar, Kasturba Medical College, P.O. Box 53, Light House Hill Road, Mangalore 575001

A solitary paradise flycatcher that frequented my fish pond in Mangalore, for well nigh eleven years, thrice a day, everyday, except during the monsoons, has disappeared now. This year post-monsoon, the return of the bird has not occurred. The bird, a prize specimen of the species, sported long streamers, and had made itself quite adept at modulating the residential movement time table to suit its aquatic sorties. So familiar was it with the residents, that it would quite boldly announce its arrival, and follow its ritualistic bathing exercise, even in the presence of my Rajapalayam dogs standing six to ten feet away. The family was allowed even closer, and we could sit on the fishpond's ledge while it dived and chirruped to hearts content.

Any number of visitors to my home have been witness to the antics of the bird, which on occasions appeared to play games with the dogs. The requirement of the bird was that one of us, restrain the hound by holding its collar, whilst the bird went about its ablutions. Once or twice the bird would chase the dog away from elsewhere towards us, so that the dog could be held. Over the years I have attempted to photograph the bird, but bad camera and poor cameramanship ruined my efforts. Last May, the premonsoon of 2001, I managed to snap the bird from hardly 5 feet away. Little did I reckon then, that this was the last call of the grand bird. The developed film sent here was taken then.

The Paradise had seen my infant daughter grow from a toddler to a temperamental teenager, has watched me graduate from a two wheeler to a car, seen our house metamorphose under yuppie influence, from a derelict old tile roofed tenement to a nattily maintained cottage, it had seen the advent and exit of Great Danes, Boxers and Dacshunds, and succeeded in 'educating' my Rajapalayams into becoming bird-dogs of a more genial kind. Every day I wait, for the tell-tale chirrups but I hear them no more. Gone is the bird, its tail leaving a divine ethereal signature in my garden.

AN ALL - BLACK CROW PHEASANT. Dr. Arunachalam Kumar, Kasturba Medical College, P.O. Box 53, Light House Hill Road, Mangalore 575001

A dense patch of shrubbery that abuts my Mangalore residence, has despite the rapaciousness of city developers, remained isolated and undiscovered. This verdant Eden has given me a plethora of data on urban avifaunal wealth, material sufficient enough for me to write regularly on a sighting or two of note to the Newsletter or other internet based natural history sites. On 19th Dec, 2001, at around 11A.M. I saw a large clumsy bird hip-hopping on the low shrubs. The bird was unmistakably a crow-pheasant (*C. sinensis*) or coucal. The size, shape and fidgety movements, fanning tail and tip-over gait, all tell tale identification markers for the coucal; what was astounding about the bird, was that it was entirely black in colour! No chestnut hued wings - all black!

Quite flummoxed, I put the sighting on the net, and pronto, I had a call from Mr. S.A. Hussain (BNHS and 'vulture scarcity-my foot' fame) a wellwisher and guide, who schooled me on some information, that *inter alia*, confirmed my observations fitted with the rare but known melanistic morphs in cuculiformes.

NESTING BEHAVIOUR OF PAINTED STORKS. Harish R. Bhat, Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012

Kaggaladu, a small village in Tumkur district has gained attention of many bird watchers and nature lovers for having seasonal visitors "painted storks" since four years. This was my second visit to the area and I was with my friend Dr. Ameen Ahmed of Wildlife Aware Nature Club to see how many painted storks have visited and are breeding currently. The villagers have great affection towards these seasonal visitors and encourage their visiting, giving less priority for their income from tamarind.

It was a very picturesque sight to see hundreds of painted storks gathering on five strong and sturdy tamarind trees in the midst of the human habitation. Some of them were feeding their chicks with fish and a few others were incubating their eggs. It was indeed

nice to see some of them taking a great turn, high on the sky and slowly perching on their respective nest-bearing branches. There were grey herons (*Ardea cinerea*) in few numbers on the same tree. My attention was dragged by one of the painted storks (male) which was sitting on a Portia tree (*Thespesia populnea*) and trying to cut off the leaf-bearing twig with its powerful broad beak. I watched carefully as it cut the twig and flew to its nest on the tamarind tree. There was a female stork, which grabbed the twig from the male's beak, put it down inside the nest and spread it with its feet. This behavior was observed with other individuals too! Some of them would gather dry twigs, branches from the nearby crop field and trees by exactly measuring the size of the twig with its beak. This kind of behavior was quite interesting as they were strengthening their nests with the available materials nearby with much care and selection. The sun was setting and the birds were gathering at their nests, which made us realize that we had to return home.

The following is a list of the different plant materials, which they selected for building their nest :

Source of plant materials (twigs, leaves and branches) used for building the nest:

Species	Common name	Family
<i>Tamarindus indicus</i>	Tamarind	Cesalpiniaceae
<i>Ficus religiosa</i>	Peepal	Moraceae
<i>Thespesia populnea</i>	Portia tree	Malvaceae
<i>Samanea saman</i>	Rain tree	Mimosaceae
<i>Prosopis spicigera</i>		Mimosaceae
<i>Azadirachta indica</i>	Neem	Meliaceae
<i>Pongamia glabra</i>	Indian Beech	Fabaceae
<i>Cajanus cajan</i>	Pigeon pea	Fabaceae
<i>Sorghum vulgare</i>	Jowar	Poaceae
<i>Celosia argentea</i>	Prince's feathers	Amarantaceae

ENJOYING BIRDS. Pragati Nayak, "Aashirwad", Sampe, Aryapu Post, Puttur Taluk, D.K 574210, Karnataka

On the ninth of this month, Dec, 01. I observed three small birds foraging on the ground behind my house. I was able to identify them easily from having seen a picture of them in Collins Handguide to the Birds of the Indian Subcontinent. Identified them as Black-headed babblers.

Their behaviour was typically babbler like - tossing and turning leaves on the ground and hopping about, all the while churring. When I went home to read up about them, I was surprised that the bird has not even been mentioned in Salim Ali's Book of Indian Birds (Centenary Ed.). In the Collins Handguide, it states that the bird is very common in Sri Lanka and in the lowland and hill forests of W and SW India. It keeps to thick undergrowth in ravines and along streams in evergreen forests. The vegetation around my

house can be described as lightly wooded deciduous, so I wonder what these birds were doing here. Could these birds have come from cooler evergreen forests to spend winter in the warmer climate here ? I would like to know if other birdwatchers have seen this bird in this area (D.K. district of Karnataka) at this time, and also if, they see it regularly in winter. This is the first winter I have seen these birds here. I did not see them the next Sunday (16th) and neither on the following Sunday (23rd) but on Christmas day I did see them again. They were foraging in the same place as before and there were three of them.

This winter, paradise flycatchers are conspicuous by their absence. I generally see several near my house between December and February, but so far this winter I haven't spotted a single one.

BIRDS IN SARISKA. Lt. General Baljit Singh, House 219, Sector 16 A, Chandigarh 160 015

Dr. A. K. Gupta's account of his visit to the Sariska Tiger Reserve (NLBW Vol. 41, No. 5, Sept.-Oct. 2001 page 69) instantly put me on the "fast-reverse" memory mode crowded with wildlife encounters there. But I was intrigued where he talks about two birds, near, Alwar town, on the mud boundary wall of a kutch house which he presumed to be either the Houbara or the lesser florican. I have spent countless number of days and nights in and around Alwar and in the Sariska Tiger Reserve between 1985-89, in an uninterrupted spell but had no such sightings.

The Houbara had been strictly a winter visitor to Pakistan from its breeding areas mostly in Iran. Some birds did reach as far West as what is now Rajasthan and Punjab. So far as Punjab is concerned, the Houbaras were never seen after 1950 (certainly not in the traditional shooting areas). A few birds were reported from here and there upto the 1960s in a narrow fringe of western Rajasthan contiguous to the Pakistan border. I doubt if the Houbaras were ever spotted in Alwar; not even in the days of abundance and for sure never after the 1970s. Remember Alwar is a mere 170 kms from Delhi.

Yes, the lesser florican was common to and a favoured game-bird in parts of Punjab and most of Rajasthan. This was so till the 1950s, diminished rapidly by the 1960s and I doubt if it was seen at all thereafter. I heard of their last sighting in Dec. 1948 on a Christmas shoot in what is now the Bathinda district of Punjab. They were so wary of humans that using camels and horses as a ruse it was always an exacting task to get a few birds driven to fly over the line of concealed guns.

There is just no way that either of these two species of birds would enter human habitation of the kind narrated by Dr. Gupta. My guess is that what he saw were two broody hens who usually put their tails up fanlike (a la Laka pigeons) in protest when disturbed from their brooding corners in village huts.

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Cover : Male Great-tailed Grackle (*Quiscalus mexicanus*). A large grackle with iridescent black with purple sheen on head, back and under parts. This grackle has a long keel-shaped tail and golden yellow eyes. Occurs in open flatlands, with scattered trees, marshes and wetlands in south-western states of North America. The calls include clear whistles and loud *clacks*. This bird has been rapidly expanding its range northwards as well as westwards. Photographed near its nest in Arizona in April.

Photo : S. Sridhar, ARPS